CEREBROSPINAL FLUID RHINORRHOEA FOLLOWING REMOVAL OF AN ACOUSTIC NEUROMA

A CASE REPORT*

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An uncommon complication of the radical removal of an acoustic tumor is a cerebrospinal rhinorrhea by way of the Eustachian tube. This sequel appears to have been recorded only by Dandy, although from personal correspondence and discussion, it is apparent that many other surgeons have encountered it. Since its cure may present difficulties, the following case is reported in detail.

CASE REPORT

A. De la S. (#686149), a 29-year-old housewife, was admitted to The Johns Hopkins Hospital on Oct. 6, 1954. At the age of 12, she had had an attack of measles following which the hearing in the right ear was impaired. In the ensuing years, the auditory acuity in this ear gradually diminished. In July 1954, the patient noted formications and numbness on the right side of the face and tongue. Upon awakening on Aug. 8, 1954, she experienced severe vertigo with things whirling about in a clockwise direction; she felt nauseated and vomited. Because of persisting nausea and vomiting she remained in bed 2 weeks. About this time she noted that the right ear was deaf. A second attack of vertigo and nausea of a milder degree occurred in the latter part of August. She had no other symptoms referable to the central nervous system. Her past history was not particularly significant.

Examination. The general physical status of the patient was normal. There was slight blurring of the optic discs but because of a high degree of myopia the significance of this finding was uncertain. The extraocular movements and pupillary reactions were normal in all respects. There were hypesthesia and hypalgesia in the 2nd and 3rd divisions of the right trigeminal nerve and a slight but definite paresis of the right facial muscles. The hearing was markedly impaired and the caloric reactions were absent on the right side. Motor, sensory and reflex systems were normal. The patient’s usual gait was on a broad base and when walking tandem she was unsteady and tended to sway or fall to the left.

On roentgenograms of the skull a large defect was seen in the right petrous apex (Fig. 1). On the basis of the history, findings and complete absence of acoustic and vestibular function on the right side and the marked erosion of the petrous portion of the temporal bone, a diagnosis of right acoustic neuroma was made.

1st Operation. On Oct. 10, 1954 through a vertical right occipital incision the right cerebellar hemisphere was exposed, and its lateral third was ablated to expose a firm encapsulated tumor in the cerebellopontine angle. Just anterior to the 9th, 10th and 11th nerves the tumor had eroded the petrous portion of the temporal bone over an area approximately 2 cm. in diameter. The capsule of the tumor was cut from the margin of the internal acoustic meatus, gradually dissected from the adjacent cerebellum and with little difficulty was removed in one piece. Tumor tissue in the internal acoustic meatus was curetted out and the cavity, which measured almost 2 cm. in diameter, was thoroughly cauterized with the electro surgical

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unit and bone wax was applied to its roughened surface. The wound was closed without drainage.

Postoperative Course. The patient's convalescence was uneventful until, on October 18, watery discharge from the right nostril was noted. During the next few days varying amounts of fluid drained from the nostril, on some occasions there being no drainage and again considerable. On October 25 the fluid collected had 68 mg. per cent of reducing substance.

2nd Operation. Because of the persistent drainage the wound was explored on Oct. 26, 1954. Under Pentothal anesthesia a vertical incision was made in the right temporal region and carried down to the squamous portion of the temporal bone. The bone was perforated and the opening was enlarged. Upon elevating the dura mater from the petrosal ridge a darkened area of thin bone—the tegmen tympani—was seen overlying the dilated internal acoustic meatus. When this was ruptured a large cavity in the petrous tip was exposed in which could be seen the lateral aspect of the pons and cerebellum. In the base and walls of this cavity were numerous large mastoid air cells which were plugged with bone wax and Gelfoam.

Course. The patient recovered from this operation quite well and had no rhinorrhea. She was discharged from hospital on Nov. 4, 1954, but within a week was readmitted for a lateral tarsorrhaphy because of a corneal ulceration. Two days later fluid was seen draining

Fig. 1. Photograph of a roentgenogram of the skull to show the extensive erosion of the right petrous pyramid. The pneumatization of the mastoid is well shown.